

pieces of stone. The nets are sunk in deep water, from 80 to 150 feet, well out at sea. They are put in one day and taken out the next; so that they are down two or three times a week, according to the state of the weather and success of the fishing. The lesser sharks are commonly found dead, the larger ones much exhausted. On being taken home, the back fins, the only ones used, are cut off, and dried on the sands in the sun; the flesh is cut off in long strips, and salted for food; the liver is taken out, and boiled down for oil; the head, bones and intestines left on the shore to rot, or thrown into the sea, where numberless little sharks are generally on the watch to eat up the remains of their kindred.

The fishermen themselves are only concerned in the capture of the Sharks. So soon as they are landed, they are purchased up by Banians, on whose account all the other operations are performed. The Banians collect them in quantities, and transmit them to agents in Bombay, by whom they are sold for shipment to China.

2. ON THE IGUANA OF ST<sup>A</sup> LUCIA, *METOPOCEROS CORNUTUS*  
OF WAGLER. BY LIEUT. TYLER, R.E.

This species attains a length of five, and sometimes even of six feet, the tail being about twice and three-quarters the length of the body. When first hatched it measures four inches. The tail is thick at its commencement, and is so connected with the body that it becomes difficult to define precisely their respective limits. The fore and hind legs are thick and muscular, with five toes on each, armed with strong hooked talons, by any one of which the animal can support itself. Of the fore-legs the third and fourth toes are the longest; and of the hind-legs the fourth toe is of an enormous length, and has five joints. Under the toes the scales form a double row of denticulations. The nostrils are large, oval, and not mobile, and above them are two horns, with five or six tuberculous excrescences between them and the nostrils, and surrounding the horns. The mouth is large, and armed with two rows of maxillary and two of palatal teeth, which appear simply to be intended to crop leaves and to provide the stomach with vegetable food. Each maxillary tooth is a little double-edged saw, and they are so lapped over each other that the reptile, in closing its mouth upon a leaf, cuts through it completely. The tongue is divided at the point, is very wide, and can be extended out of the mouth, although it is fastened to the interior of the lower jaw near its extremity. The tongue is curiously used by the animal to draw food into the mouth, and to forward it down the gullet, or to repel it at will, and the only use of the palatal teeth appears to be to secure the food while the tongue moves forward to afford fresh assistance in its journey down the throat\*. Between the lower jaw and the chest is a pouch, which the animal draws in or extends simultaneously with the compression or swelling out of the body when enraged or excited. The portion of the gular pouch attached to the jaw is inflatable, and food is sometimes retained in it for a consider-

\* The tongue is always covered by a glutinous secretion, which is perceptibly appended to the jaws when the mouth is open.

able period, but the lower part is merely extensible. On the anterior part of this pouch or dewlap, and immediately below the jaw, are from five to seven denticulations similar in substance and colour to the dorsal crest, but not so long.

This crest or mane commences behind the head, with three or four excrescences of different sizes, then suddenly becomes, in larger Iguanas, an inch and a half or two inches in length, and runs uninterruptedly down the back and tail, gradually diminishing, excepting above the commencement of the tail, where a slight increase again takes place, until, at the extremity of the tail, it is undistinguishable. The dorsal crest consists of about fifty protuberances, and the caudal crest of about 218, each of the latter becoming gradually harder as they decrease in height, and so altering their shape as to resemble, down the greater part of the tail, the edge of a saw.

The ear is covered by a thin scale, which gives to the touch, but does not seem sensitive. There is no external opening, nor does the sense of hearing appear to be very acute or much used by the animal, who trusts more to the eye to discover both his food and his enemies.

The eye is bright and prominent, and is protected by an inner cuticle as well as the lower eyelid; the upper lid not moving to aid in covering it, but only when the direction of sight is altered in a perpendicular direction. There are soft brows over the eyes of a spherical shape, and projecting above the remainder of the upper part of the head.

The general colour is bright green in the young and dirty grey in the old Iguanas, with about six black streaks across the body and fifteen across the tail, each streak being darker towards the head, and gradually shaded off towards the tail. These streaks extend over the dorsal and caudal crests, which partake entirely of the variegations of the body in the younger, but, in the older individuals, are tipped with red and yellowish brown at their bases and extremities. These black streaks do not unite under the belly or under the anterior part of the tail, but towards the extremity of the tail they gradually elongate and become more dull, encircling the tail, and at last becoming hardly discernible, mixing with the green or grey into one dull tint.

The dewlap, as well as the folding skin in front of the shoulder, connected with it, is interspersed with black and yellowish brown, of which colours the denticulations of the dewlap also partake. The upper part of the head is of a darker and richer green in the young, fading as the animal advances in years, and becomes weather-beaten, as is the case with the human species, and with all animal and vegetable life. The whole of the under part of the body is of a lighter colour in both old and young. The female has a more delicate colour and general appearance than the male.

Whilst always retaining the same colours, this Iguana has the power of considerably changing his hues, but these changes are gradually performed. The colours become more dull as the period of the change of skin approaches, which is not, however, frequent. Each scale has its own tint, and the colours being thus irregularly blended, an appearance is given, particularly to the younger reptiles, very much

like that of worsted-work. The colour of the eye is dark brown, the pupil being surrounded by a golden rim.

Every part of this curious reptile is covered with scales, and these are of every variety of shape and size. Those on the top of the head are large, smooth, and unequal; between them and the mouth runs a row of smaller scales, while the mouth itself is surrounded, both in the upper and lower jaw, by large scales terminated at the extremity between the nostrils, by one large brownish and softer scale in the upper jaw, and a similar though smaller scale meeting it in the lower jaw. From this latter, and below those immediately surrounding the mouth, is a range of scales or rather plates, each larger than its predecessor, terminated on either side by a very large plate under the auricle. Below this row of scales is the gular pouch (Fanon) covered by small, smooth scales. The eye is protected above by small, smooth, unequal scales, which also form part of the covering of the top of the head. The scales of the lower eyelid are peculiarly small and delicate; and a row of semispherical scales, resembling somewhat a string of small pearls on each lid, surrounds the eye. At the back of the head the scales become tuberculous, and a few on each side of the neck assume a pyramidal or rather a conical form. The scales of the neck and back are almost circular, but nearer the tail they become rhomboidal and carinated, their posterior points elongating, and their centres projecting more and more, both above and below, as they reach the extremity of the tail, so as to give it the form of a many-edged saw, the most severe edge being that presented by the caudal crest. The scales above the fore-legs are equal, carinated, and imbricated, assuming, at the foot and along the toes, a convex and smooth appearance. Under the fore-legs they are smaller, and peculiarly so at the joints and under the feet; the most delicate, however, are those under the leg, and connecting it with the body. The hind-legs are similarly clothed to the fore-legs, excepting that they are provided with a single row of femoral pores, fourteen or fifteen in number, and which increase in size with the growth of the reptile. These pores are large and fully developed in the male, but small and sometimes even hardly perceptible in the female.

The scales of the belly are very different from those of the back, being larger, equal, and carinated, although generally worn almost smooth in the old individuals. They are divided by a distinct line from the termination of the dewlap to the vent.

The Iguanas live principally in trees, and near the windward coast of the island. They are not much seen excepting in the months of February, March, and April, when they quit their hiding-places, and repair to the sea-shore or other sandy places to lay their eggs in the sand. The older females lay a great number of eggs; I have known an instance of one in confinement laying five in one day; and thirty-two, within the space of ten minutes, five days afterwards, making thirty-seven in all. I have taken the eggs from the bellies of small females in less numbers, such as eight, fourteen, and seventeen. They are not found in successive stages of advancement as in the hen, the tortoise, and many other animals, but all of the same size, and arrived

at the same degree of maturity. Nor are the eggs always disposed, as I have seen it stated, in two rows, one on each side of the belly of the female. When very small, they are arranged in a long irregular cluster, closely packed together, and they seem to retain the same relative position as they increase in size. The eggs are very liable to destruction from ants, which fact probably accounts for their being usually deposited in sea sand. They are also hunted for and eaten by the *Pilori* (*Mus pilorides*), or "Rat Musqué," and by a bird called the "Trembler." They are soft and without any white, and their shell resembles the most beautiful kid used for French gloves, of a very light straw-colour. They are about the size of those of a pigeon, but rather longer; they vary however in dimensions, according to the age and size of the Iguana.

This Iguana is not averse to water, when not too cold, taking to it only when the sun is shining; in fact, not moving about much at any other time. Its mode of swimming differs from that of other lizards, inasmuch as it places its four legs close by the side of its body, and swims entirely with its tail. It dives with great facility, and remains sometimes for a considerable time under water. I believe that the Iguana never ventures into the sea. The tail is a very valuable limb; for besides being the sole means of swimming possessed by the animal, it is of great use in climbing trees, although not prehensile; and it is a most important weapon of defence, a blow from it being frequently sufficient to inflict a severe wound. In fact, this reptile is rather formidable when brought to bay in the woods. It is hunted by the natives with dogs trained for the purpose. The dog immediately upon scenting it gives tongue, and if on the ground, the dog seizes it by the back, and either kills it or maims it, which makes its capture easy; if in a tree, the Iguana is either shaken down, a matter ordinarily of no small difficulty, or the branch is cut off. It is almost useless to attempt to find these reptiles without dogs, as the resemblance of their colour to that of the trees they inhabit prevents them from being easily seen. Few dogs but those accustomed to the sport will touch them, as, in addition to the blows which they inflict with their tails, they bite and scratch furiously; and when once they lay hold of anything with their teeth, they can only be made to let go by an inducement to bite, some other attractive object being offered to them. They run into holes when chased, if an opportunity offers, and when their eyes are hidden from view, they fancy that their whole body is safely covered. The flesh, particularly of the female, is a great delicacy; it is cooked in various ways, sometimes in a fricassee, with the eggs whole, sometimes roasted or stewed. The eggs have a very glutinous taste. The flesh is said to disagree with some constitutions, although it does not, I believe, as has been asserted, disagree peculiarly with those persons who have been affected with venereal diseases.

This Iguana is said by some of the natives to eat lizards and insects, but I have opened several, and I have never succeeded in finding any but vegetable matter in the stomach, sometimes, however, covered with innumerable small worms, the eggs of which must

doubtless have been swallowed with the leaves, fruit, or bark of trees, upon which, I conceive, it feeds entirely.

Unless caught young, it is very difficult to induce these reptiles to feed in confinement, and particularly when watched. Their disposition is sulky and savage, and I have known some of them die in confinement from starvation rather than feed. This has caused me to try the following plan, which I find very successful, of affording them nourishment. I hold them by the lower part of the body with one hand, and with the other I irritate them, until they open their mouths and attempt to bite, when I insert food; and by annoying them in this way, I have not only made them eat their natural food, but I have killed some of them by forcing them to eat corn, and leaves which appear to have disagreed with them.

This Iguana has a small rounded heart, reddish lungs, an oblong gall-bladder, a large dark-coloured flat liver, and a white, and very extensible oblong stomach.

#### BOTANICAL SOCIETY OF EDINBURGH.

April 10, 1851.—Professor Balfour, President, in the Chair.

Mr. M'Nab exhibited, from the garden of Dr. Neill, a large specimen of *Gentiana verna*, in full flower in a pot. The patch was eight inches in diameter, and the number of flowers was 106; when first brought into the room all the flowers were closed, but under the influence of gas-light they opened, and in the course of an hour they were fully expanded. Mr. James Thomson (Dr. Neill's gardener) was requested to make a few experiments on the effects of light and heat upon the plant; the following particulars have since been furnished by him:—

1. On 11th April, the Gentian was placed in a warm plant-stove, the temperature of which was about 63°, and the flowers soon opened (in the absence of light) and continued open so long as exposed to the high temperature.

2. On the 12th April the plant was removed to a cool room (temperature 48°) in which a jet of gas was burning. In this situation the flowers likewise opened about an hour after the plant was put in.

3. On 14th April, about mid-day, the plant, in full bloom, was taken to a cool dark cellar, where the flowers closed almost immediately.

4. On the 15th April it was placed in a cold dark place, from six A.M. till two P.M., during which period the flowers were all partially closed: the plant being then exposed to light, the flowers expanded in about half-an-hour.

Mr. M'Nab exhibited a flowering specimen of *Lathræa squamaria* from Dr. Neill's garden at Canonmills, where it has been blooming since the beginning of March. The plants were placed on the roots of pear, filbert, and hazel; on the latter only did it succeed, and it now covers a space of ground three feet in diameter, annually producing numerous flower-stems, as large and perfect as in its native locality.